



1141023 - R8 SDMS

March 11, 2009

Sent via email

Eric Johnson  
U.S. Environmental Protection Agency  
Region 8, 8ENF-T  
999 18<sup>th</sup> Street, Suite 300  
Denver, Colorado 80202-2466

RE: Progress report for February 2009 activities - Hecla Mining Company Apex  
Site (EPA ID No. UT982589848, Docket No. RCRA-8-99-06)

Dear Mr. Johnson:

Per paragraph 64 of the Order, enclosed is a copy of the February 2009 progress  
report for your records.

If you have any questions please do not hesitate to call me at (208) 769-4112 or e-  
mail at [pglader@hecla-mining.com](mailto:pglader@hecla-mining.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Paul L. Glader".

Paul L. Glader  
Manager Environmental Services

Encl

Cc: HMC Legal Dept (w/o attachments)  
John Jacus, Esq. (DG&S)



**March 11, 2009**

Sent via U.S. Mail

**Glenn Rogers, Chairman.  
Shivwits Band of Paiute Indian Tribe  
6060 West 3650 North  
Ivins, Utah 84738**

**John Krause  
Bureau of Indian Affairs  
400 North 5<sup>th</sup> Street, Floor 12  
Phoenix, AZ 85004**

**Kelly Youngbear  
BIA Southern Paiute Agency  
P.O. Box 720  
St. George, UT 84771**

**RE: Progress report for February 2009 activities - Hecla Mining Company Apex  
Site (EPA ID No. UT982589848, Docket No. RCRA-8-99-06)**

**Dear Chairman Rogers, Mr. Krause and Ms. Youngbear:**

**Per paragraph 64 of the Order, enclosed is a copy of the February 2009 progress  
report for your records.**

**If you have any questions please do not hesitate to call me at (208) 769-4112 or e-  
mail at [pglader@hecla-mining.com](mailto:pglader@hecla-mining.com).**

**Sincerely,**

A handwritten signature in black ink, appearing to read "P. Glader", written over a horizontal line.

**Paul L. Glader  
Manager Environmental Services**

**Encl**

**Cc: HMC Legal Dept. (w/o attachments)  
John Jacus, Esq. (DG&S) (w/o attachments)  
Eric Johnson (USEPA, Region VIII) (w/o attachments)**



March 11, 2009

**MEMORANDUM TO:** Apex File

**COPIES TO:** distribution

**FROM:** Paul Glader

**SUBJECT:** Progress Report No. 58 for period ending February 28, 2009; Pond 2 Final Closure - Apex Site, Washington County, Utah

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### Summary

The monthly visual inspection, per the long term monitoring plan, was conducted on February 22. No unusual conditions were noted.

### Geotechnical Monitoring

MEI completed a Surface Monument Survey Data Review, updated to include the data collected through January 2009:

- 1 - Settlement rates of most monuments have decreased to zero
- 2 - Settlement of the reclaimed impoundment top surface has in general continued to decrease very slightly. Average settlement in 2008 was similar to that of 2007 and 2006.

There appear to be no concerns to date with settlement. Consolidation of both the underlying waste materials and final reclamation cover materials appears to be very minimal. This very minor amount of consolidation also reflects that it is unlikely any liquids are leaving the impoundment.

Based on the data showing that the facility has experienced consistently low settlement rates over the past three years, MEI has recommended that Hecla continue to monitor the facility, however with survey data being collected on an annual basis.

### Work Planned for Next Period

Visual inspection of site

### Cost and Schedule

Committed costs in February 2009 were \$182. Total project to date committed is approximately \$1,472,000.

**Supplemental Attachments**

**February 2009 site inspection report**

**February 2009 cost report**

**February 9, 2009 Surface Monument Survey Data Review - MEI**

**Annual Site Inspection Summary Sheet - Apex Site - Pond 2**

**Hecia Mining Company - Long-Term Maintenance and Monitoring Plan**

**Form 1 of 4 - Summary**

Date: <u>2-22-09</u>			
Inspector: <u>D. Truman</u>			
Cover System Component	Potential Problem	Allowable Limits	Limits Potentially Exceeded
Site Perimeter	Erosion or Fencing Issues	NA	NA
Cover System (outslopes, top, rock)	Subsidence	Minor: ponding < 1" some gullying / erosion	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		Significant: see Table 2	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Embankment Slope Stability	excessive movement or surface cracks > than 1"	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Gullying	on top	depth > 1" Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
		at embankment crest or on outslope	depth > 2" Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
		w/in normal flow channel in diversion channel	no gullying allowed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
		w/in diversions at toe of impoundment outslope	no gullying allowed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
		in diversion channel at any other location	NA NA
	Erosion Protection Stability	rock subsiding or missing	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Seepage	no colored seepage allowed (red, blue, yellow w/ crystallization)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Runoff Control System	Diversion Channel	rock in place, channel not moving, fence stable	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Diversion Swales	rock in place, no silting in or head cutting	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Excessive silt build up at fence lines in diversion channel	allowed if not effecting cover system	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

\* Mark all areas of concern or requiring repairs on attached site map

Annual Site Inspection - Apex Site - Pond 2

Hecla Mining Company - Long-Term Maintenance and Monitoring Plan

Form 2 of 4 - Site Perimeter

Inspection Date: <u>2.22-09</u>	
Inspector: <u>D. Tannen</u>	
Visible Outlying Areas	
Observed Condition:	<u>All Areas looked good.</u>
Observed Damage:	<u>None</u>
May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Property Boundary Fence and Gate (walk fence line)	
Observed Condition:	<u>All fences and signs in good repair</u>
Observed Damage:	<u>None</u>
Potential Corrective Actions:	<u>None</u>
May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
All Upgradient Areas (areas that drain onto property)	
Observed Condition:	<u>Nothing new to report</u>
Observed Damage:	<u>None</u>
May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

\* Mark all areas of concern or requiring repairs on attached site map.

Annual Site Inspection - Apex Site - Pond 2

Hecla Mining Company - Long-Term Maintenance and Monitoring Plan

**Form 3 of 4 - Impoundment**

Inspection Date: <u>2-22-09</u>			
Inspector: <u>Thomson</u>			
<b>Outslopes</b>			
Observed Performance:	Rock Cover Subsidence:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Excessive Slope Movement (failure):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Gully Development:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Observable Leachate (colored):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Excessive Siltation (at slope toe):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
Observed Damage: <u>None</u>			
Potential Corrective Actions: <u>None</u>			
<b>Top (top surface soils)</b>			
Observed Performance:	Cracking (>1" width):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Settlement / Evidence of Ponding:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Erosion / Gullyng:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
Observed Damage: <u>None</u>			
Potential Corrective Actions: <u>None</u>			
<b>Erosion Protection Layer (rock)</b>			
Observed Performance:	Rock Staying in Place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Rock Subsiding:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Missing Rock:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
Observed Damage: <u>None</u>			
Potential Corrective Actions: <u>None</u>			

Mark all areas of concern or requiring repairs on attached site map.

**Annual Site Inspection - Apex Site - Pond 2**

**Hecla Mining Company - Long-Term Maintenance and Monitoring Plan**

**Form 4 of 4 - Diversion Channel and Swales**

Date: <u>D. [Signature]</u>			
Inspector: <u>2-22-09</u>			
<b>Diversion Channel</b>			
Observed Performance:	Erosion Protection in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Normal Flow Channel in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Encroaching on Site Fencing:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
Observed Damage: <u>None</u>			
Potential Corrective Actions: <u>None</u>			
<b>Diversion Swales</b>			
Observed Performance:	Erosion Protection in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Flow Channel Silted In:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Head Cutting:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
Observed Damage: <u>None</u>			
Potential Corrective Actions: <u>None</u>			

\* Mark all areas of concern or requiring repairs on attached site map.



Activity	2004 Budget	Revised Budget May 2004	Committed Cost this Period	Cumulative Committed Cost To Date 2-28-09	Forecasted Cost To Complete	Forecasted Final Cost	Remarks on Forecast to Complete
<b>Phases I through III (Completed February 2006)</b>							
Phase I - Drain Excess Liquid From Tailings	189,200	72,700		67,928	0	67,928	
Phases II, IIA + IIB - Evaporate Excess Liquid	6,000	8,000		242,882	0	242,882	
Phase III - Regrading & Final Cover System	337,000	342,050		504,742	0	504,742	
Field Indirect Costs	164,500	213,588		378,517	0	378,517	Includes Jan + Feb 2006 long term monitoring costs
Media Costs	18,700	18,700	0	33,324	0	33,324	
<b>Subtotal Phases I through III</b>	<b>715,400</b>	<b>655,018</b>	<b>0</b>	<b>1,227,393</b>	<b>0</b>	<b>1,227,393</b>	
<b>Long Term Monitoring (through FY 2010)</b>							
Site Inspections			182	188,735	1,338	190,073	
Settlement Monitoring				7,425	3,000	10,425	
<b>Consultant Support:</b>							
Annual Geotechnical Engineer Inspections				2,495	18,100	20,595	Includes settlement monitoring data analysis
Vegetation Monitoring			0	0	20,000	20,000	Allowance for surveys in FY 2008 - 2010
Site Conditions Review - MEI			0	7,414	2,387	9,801	
Site Conditions Review - SVL Analytical			0	2,079		2,079	
Erosion Repair Review - MEI				2,927	573	3,500	
Revegetation Review - Bamberg					3,500	3,500	
<b>Maintenance:</b>							
Erosion Repair Allowance				21,941	7,500	29,441	Erosion repair conducted April 2008
Revegetation Allowance				9,912	10,000	19,912	Revegetation conducted April 2008
<b>Media Project Management Costs:</b>							
Labor			0	2,266	7,909	10,175	
Travel expenses			0	0	1,312	1,312	
<b>Subtotal Long Term Monitoring</b>	<b>0</b>	<b>0</b>	<b>182</b>	<b>245,194</b>	<b>75,619</b>	<b>320,813</b>	
<b>Total Pond 2 Final Closure</b>	<b>715,400</b>	<b>655,018</b>	<b>182</b>	<b>1,472,587</b>	<b>75,619</b>	<b>1,548,206</b>	



## MEMORANDUM

TO: Paul Glader (Hecla Mining Company)  
FROM: Doug Gibbs (Monster Engineering Inc.)  
DATE: 2/9/09  
SUBJECT: **Surface Monument Survey Data Review – Apex Site**

Surface monument surveying has been conducted quarterly at the Apex Site by Alpha Engineering since January of 2006. Based on data collected through January 2009, the elevation of the reclaimed impoundment top surface has in general continued to decrease very slightly. Average settlement in 2008 was similar to rates during 2006 and 2007.

Survey monument elevation changes since installation and during 2008 are shown in the table below. All data has been corrected based on maintaining a zero elevation change at Monument #10 as it is located outside of the impoundment footprint and should experience no movement between monitoring periods.

Monument	Total Elevation Change Jan. 4, 2006 to Jan. 29, 2009		Elevation Change - 2008 Dec. 13, 2007 to Jan. 29, 2009	
	(feet)	(inches)	(feet)	(inches)
1	-0.18	-2.2	-0.07	-0.8
2	-0.14	-1.7	-0.05	-0.6
3	-0.30	-3.6	-0.12	-1.4
4	-0.10	-1.2	-0.06	-0.7
5	-0.08	-1.0	-0.03	-0.4
6	-0.06	-0.7	-0.03	-0.4
7	-0.37	-4.4	-0.08	-1.0
8	-0.22	-2.6	-0.08	-1.0
9	-0.13	-1.6	-0.04	-0.5
10 (baseline @ gate)	NA	NA	NA	NA
11 / Main (impoundment center)	-0.11	-1.3	-0.06	-0.7
<b>Average</b>	<b>-0.17</b>	<b>-2.0</b>	<b>-0.06</b>	<b>-0.7</b>

NA – baseline monument - data corrected to show no movement

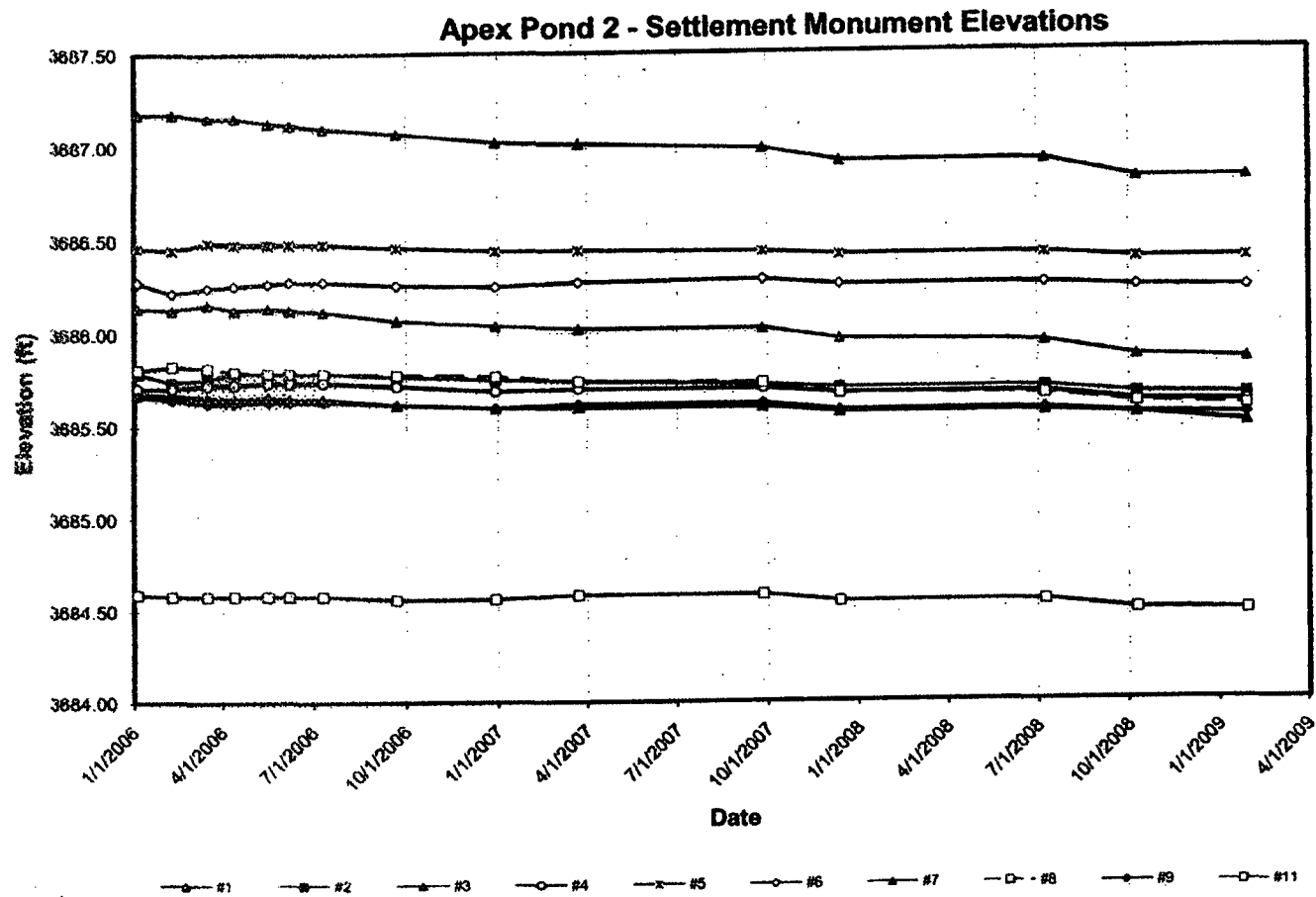
To date most apparent movement from period to period can be attributed to surveying accuracy limitations as data shows individual monument elevations both increasing and decreasing in elevation. However, when data for the monuments is "corrected" by adjusting the survey data to

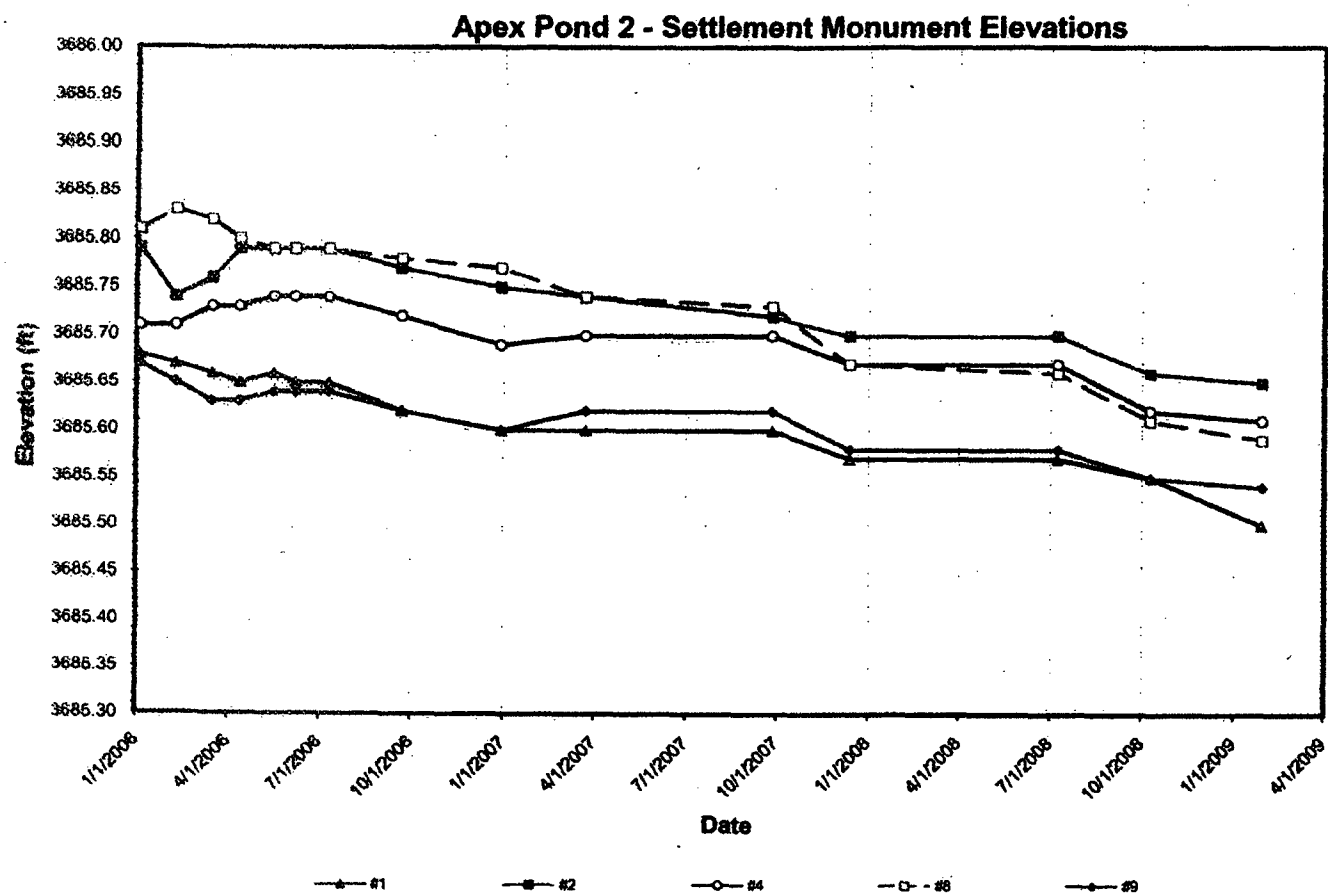
maintain a zero elevation change at Monument #10, then a general trend of decreasing elevations becomes apparent. All elevation data provided by Alpha Engineering is presented graphically on the following pages. The first graph shows all monuments (except monitor #10 the baseline point) on a scale that allows all data to be compared. The next five graphs have expanded and equivalent "Y" axes scales in order to more clearly show elevation changes, and for ease of comparison between graphs.

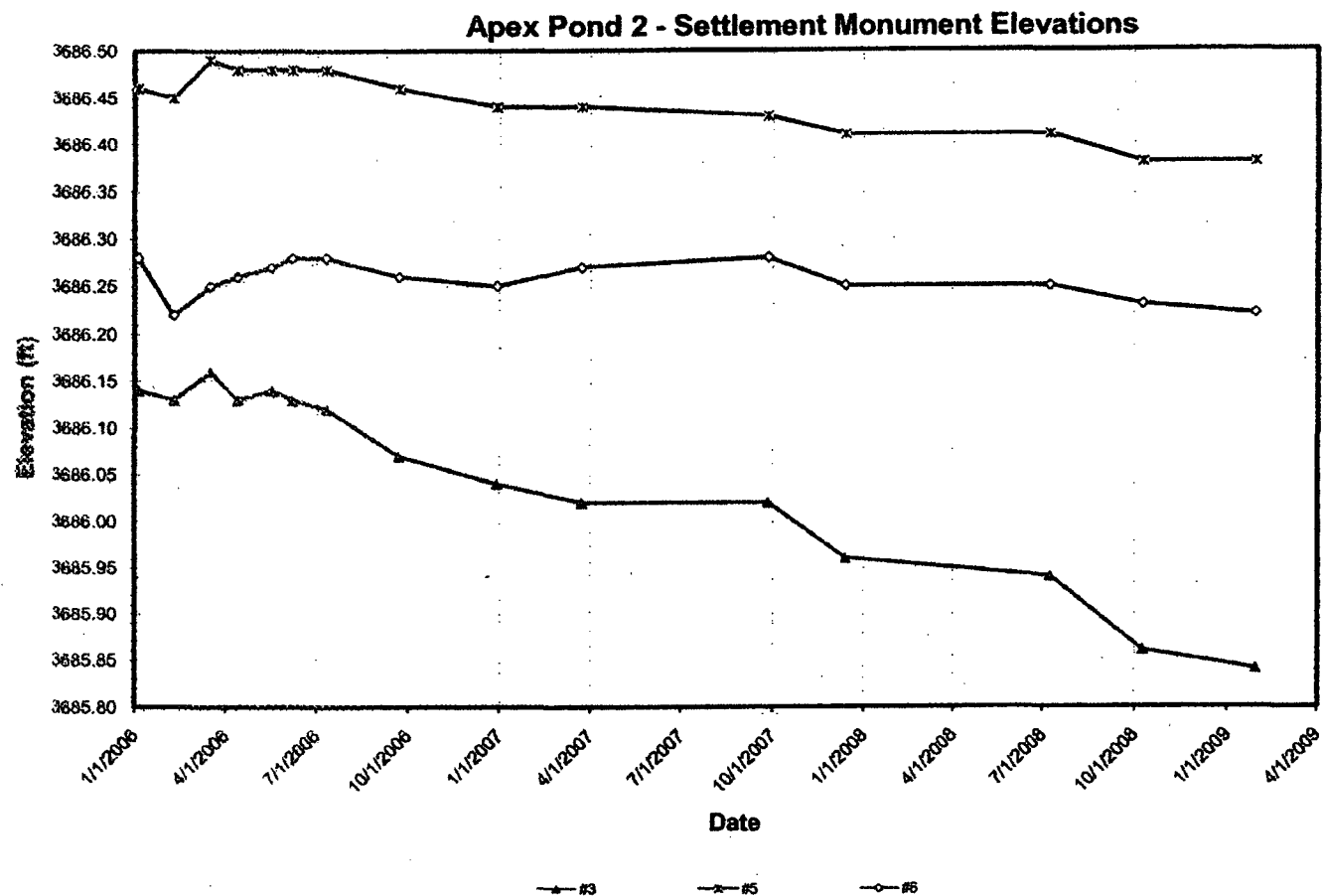
Survey data shows that the northern half of the impoundment has settled slightly more (between 0.14 and 0.3 feet) than the southern half (0.06 to 0.13 feet). A plan view of the impoundment showing each monument location (provided by Alpha Engineering) is attached on the last page of this document. Included on this map are contours showing approximate total settlement of the top surface since monument installation. The largest measured settlement is, as expected, near the center of the impoundment (monitor #7) at -0.37 feet. Slightly greater settlement in and nearer the center of the impoundment is to be expected as significant quantities of fill were placed in this area during construction. Additionally, greater settlement should be expected on the northern half of the impoundment based on the locations and methods utilized to place the original cover materials (prior to final reclamation activities). One portion of the initial reclamation project consisted of placing a temporary earthen/rock cover over the impoundment waste materials. According to Chris Gypton and Alan Wilson, these cover materials were initially dumped into the impoundment in the southwest corner and then were pushed across the impoundment towards the northeast corner. This placement method created a mud wave of unconsolidated waste which moved towards the northeast corner, and eventually a thicker deposit of unconsolidated waste materials in the northern half of the impoundment.

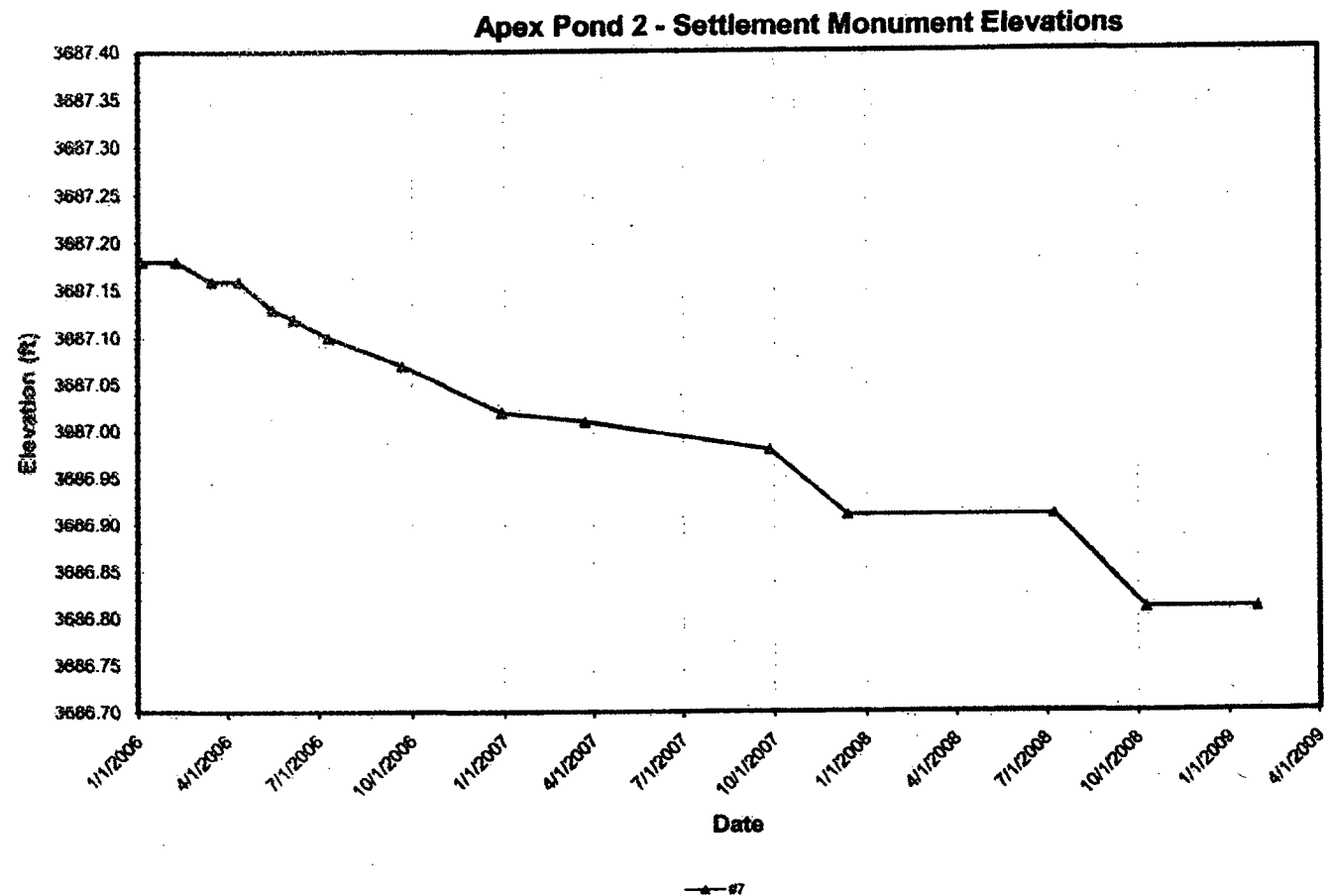
There appear to be no concerns to date with settlement. There are no low spots and no signs of ponding of rain water. As expected with long-term consolidation, the data shows that settlement rates are slightly decreasing over time. Consolidation of both the underlying waste materials and final reclamation cover materials appears to be very minimal. This very minor amount of consolidation also reflects that it is unlikely any liquids are leaving the impoundment.

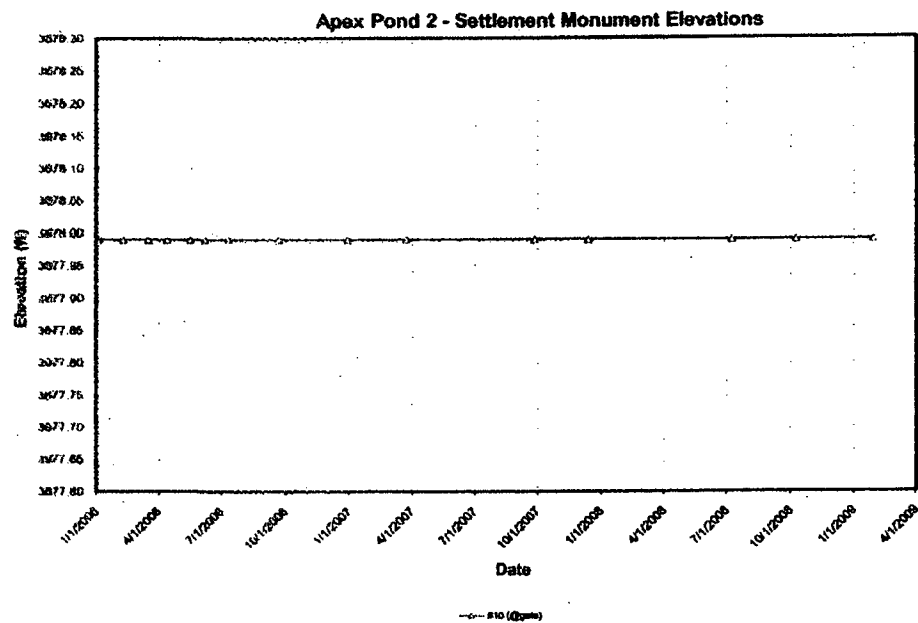
Based on the data showing that the facility has experienced consistently low settlement rates over the past three years, MEI recommends that Hecla continue to monitor the facility, however survey data need only be collected on an annual basis. Please call or email me if you have any questions concerning this review.



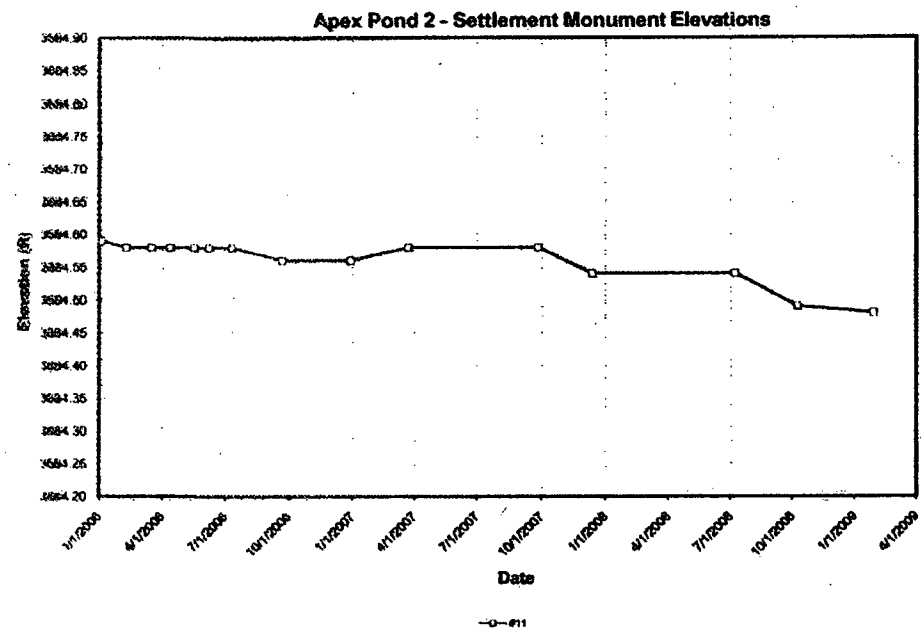


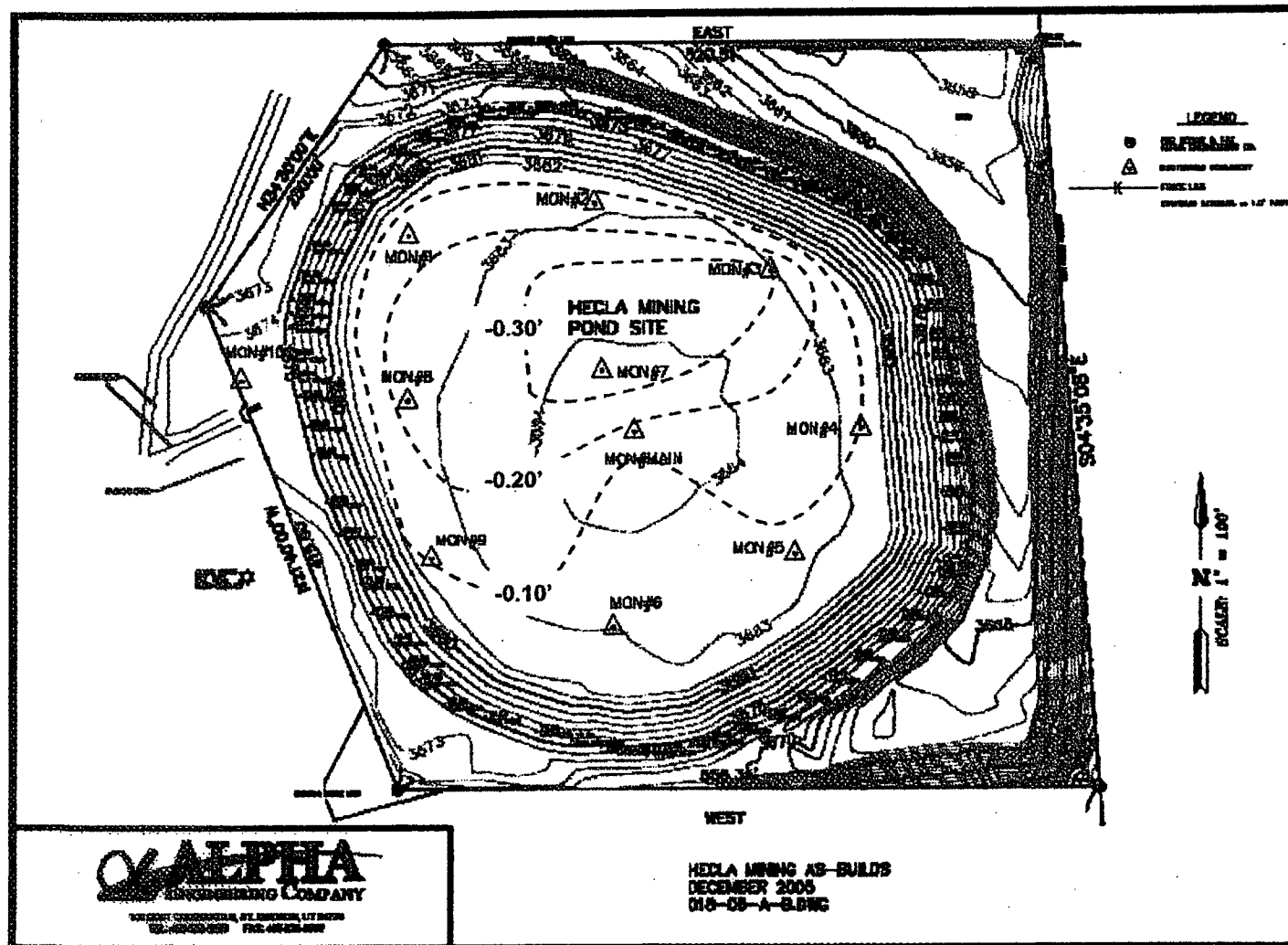












**Fw: Apex - march Monthly report**  
Eric Johnson to: Amy Swanson

04/20/2009 10:01 AM

History: This message has been replied to.

----- Forwarded by Eric Johnson/R8/USEPA/US on 04/20/2009 10:00 AM -----



**Paul Glader**  
<pglader@hecla-mining.com>

To Eric Johnson/R8/USEPA/US@EPA

cc

04/20/2009 09:39 AM

Subject Apex - march Monthly report



Apex Pond 2 - progress rpt complete, march 2009.pdf